

General Offices/3M

3M Center
St. Paul, Minnesota 55144-1000
(612) 733-1110

01-43

Rec 3-25-87

**MATERIAL SAFETY
DATA SHEET****3M**

MSDS: NEXTEL 312 CERAMIC FIBER WITH 170 SIZING
NOVEMBER 30, 1985

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1. INGREDIENTS	C.A.S. NO.	PERCENT	EXPOSURE LIMITS
ALUMINA		60.0- 64.0	N/A 5
SILICA		22.0- 26.0	N/A 5
BORIA		0.0- 16.0	N/A 5
ORGANIC POLYMER SIZING 170*		1.0- 3.0	N/A 5
*UNLESS PRODUCT IS MARKED "HEAT TREATED" OR "HEAT CLEANED"		0.0	5

SOURCE OF EXPOSURE LIMIT DATA

1. ACGIH THRESHOLD LIMIT VALUES
2. FEDERAL OSHA PERMISSIBLE EXPOSURE LIMIT
3. 3M EXPOSURE GUIDELINES
4. CHEMICAL MANUFACTURER RECOMMENDED GUIDELINES
5. NONE ESTABLISHED

ABBREVIATIONS

N/D - NOT DETERMINED
N/A - NOT APPLICABLE

2. PHYSICAL DATA
BOILING POINT: N/A SOLUBILITY IN WATER: 1-3% BY WEIGHT
VAPOR PRESSURE: N/A SP. GRAVITY (WATER=1): 2.7
VAPOR DENSITY (AIR=1): N/A PERCENT VOLATILE: 1-3% BY WEIGHT
EVAPORATION RATE (=1): N/A VISCOSITY: SOLID
APPEARANCE AND ODOR: WHITE, SHINY THREAD OR YARN pH: N/A

3. FIRE AND EXPLOSION HAZARD DATA
FLASH POINT (N/A): N/A
FLAMMABLE LIMITS - LEL: N/A UEL: N/A

EXTINGUISHING MEDIA:
N/A

SPECIAL FIRE FIGHTING PROCEDURES:

UNUSUAL FIRE AND EXPLOSION HAZARDS:

THE 170 SIZING WILL DECOMPOSE (SEE HAZARDOUS DECOMPOSITION PRODUCTS IN SECTION 4.)

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4. REACTIVITY DATA

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STABILITY: STABLE

INCOMPATIBILITY - MATERIALS TO AVOID:
NONE

HAZARDOUS POLYMERIZATION: MAY NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS:

SMALL AMOUNTS OF CARBON MONOXIDE (CO), NITROGEN OXIDES (NOX), HYDROGEN CYANIDE (HCN), ACRYLONITRILE, AND, POSSIBLY, ETHYLENEIMINE MAY EVOLVE ON FIRST HEATING AS A RESULT OF SIZING DECOMPOSITION. ACRYLONITRILE AND ETHYLENEIMINE ARE REGULATED BY OSHA AS POTENTIAL HUMAN CARCINOGENS. SEE SECTION 8.

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5. ENVIRONMENTAL INFORMATION

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SPILL RESPONSE:

OBSERVE PRECAUTIONS FROM OTHER SECTIONS.

USE DUST MASK.

COLLECT SPILLED MATERIAL.

VACUUM, USE WET SWEEPING COMPOUND, OR WATER TO AVOID DUSTING.

RECOMMENDED DISPOSAL:

DISPOSE OF WASTE PRODUCT IN A SANITARY LANDFILL.

DISPOSAL SHOULD BE IN ACCORDANCE WITH APPLICABLE REGULATIONS.

U.S. EPA HAZARDOUS WASTE NO: NONE

ENVIRONMENTAL DATA:

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6. SUGGESTED FIRST AID

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EYE CONTACT:

IF EYE IRRITATION OCCURS, FLUSH EYES WITH WATER.

SKIN CONTACT:

IF SKIN IRRITATION OCCURS, WASH AFFECTED AREA WITH SOAP AND WATER.

REMOVE AND LAUNDER CLOTHING BEFORE REUSE.

INHALATION:

N/A

IF SWALLOWED:

N/A

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7. PRECAUTIONARY INFORMATION

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LOCALIZED EXHAUST AND/OR USE OF NIOSH APPROVED DUST RESPIRATORS IS RECOMMENDED IN AREAS WHERE NEXTEL CERAMIC FIBERS BECOME READILY AIRBORNE. ADEQUATE GENERAL VENTILATION AND GOOD HOUSEKEEPING PRACTICES REDUCE THE AMOUNT OF AIRBORNE FIBERS IN THE WORKPLACE. TEMPORARY LOCAL SKIN, EYE, OR UPPER RESPIRATORY SYSTEM IRRITATION MAY OCCUR WHEN PROCESSING OR USING NEXTEL CERAMIC FIBER MATERIALS. THIS IRRITATION IS SIMILAR TO THAT PRODUCED BY GLASS FIBERS, AND IS

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TIPIFYED BY ITCHING AND SLIGHT REDDENING AND SWELLING OF THE SKIN. PROCESSES WHICH YIELD EXCESSIVE FILAMENT BREAKAGE, SUCH AS CHIPPING, INCREASE THE POTENTIAL FOR SKIN IRRITATION. ADEQUATE LOCAL EXHAUST VENTILATION, GOOD HOUSEKEEPING PRACTICES, AND CAREFUL WORK HABITS HELP TO REDUCE EXPOSURE. SAFETY GLASSES AND PROTECTIVE CLOTHING AS LAB COATS, GLOVES, AND TIGHT FITTING CUFFS, PROVIDE ADDITIONAL PROTECTION TO SKIN AND EYES. NIOSH APPROVED DUST RESPIRATORS MAY BE USED TO FURTHER REDUCE INHALATION EXPOSURE TO AIRBORNE FIBERS. UNLESS THEY ARE MARKED "HEAT-CLEANED" OR "HEAT-TREATED". NEXTEL CERAMIC FIBER MATERIALS HAVE A SURFACE COATING (SIZING) WHICH IS APPLIED DURING MANUFACTURING AS A PROCESSING AID. THIS SIZING MAY PRODUCE SMALL QUANTITIES OF HAZARDOUS DECOMPOSITION PRODUCTS WHEN FIRST HEATED (SEE SECTION 4). HEAT CLEANING IS AVAILABLE TO MEET YOUR SAFETY OR PROCESS REQUIREMENTS. ANY OPERATIONS INVOLVING INITIAL HEATING OF NON-HEAT-CLEANED FIBERS SHOULD BE CONDUCTED WITH EFFECTIVE VENTILATION CAPABLE OF PREVENTING VAPOR AND GAS BUILD-UP. ALSO, THESE OPERATIONS SHOULD BE MONITORED FOR THE PRESENCE OF THE OFF-GASSES. GENERALLY, IF CARBON MONOXIDE LEVELS ARE KEPT BELOW THE THRESHOLD LIMIT VALUE, EXPOSURE TO THE OTHER COMPONENTS SHOULD BE INSIGNIFICANT. REFER TO THE HEAT CLEANING PROCEDURE BULLETIN AND PRODUCT SAFETY BULLETIN FOR ADDITIONAL INFORMATION.

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8. HEALTH HAZARD DATA

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NEXTEL CERAMIC FIBERS MAY PRODUCE MINOR MECHANICAL IRRITATION OF THE SKIN, EYES, NOSE, MOUTH AND THROAT FROM RELEASE OF FIBERS INTO THE AIR AND SETTLING ON PROCESS SURFACES DURING CERTAIN OPERATIONS. THIS IRRITATION IS SIMILAR TO THAT PRODUCED BY FIBERGLASS AND MAY INCLUDE ITCHING, REDDENING AND SLIGHT SWELLING OF CONTACT AREAS. SEE SECTION 7 FOR INFORMATION ON PRECAUTIONARY MEASURES WHICH CAN BE TAKEN TO MINIMIZE THE POSSIBILITY OF IRRITATION.

THE DECOMPOSITION PRODUCTS FROM INITIAL HEATING OF SIZED FIBERS MAY PRESENT A POTENTIAL HAZARD UNDER CERTAIN CONDITIONS. PLEASE REFER TO SECTIONS 4 AND 7 FOR ADDITIONAL INFORMATION.

THE INHALATION OF NEXTEL CERAMIC FIBERS IS NOT EXPECTED TO PRESENT A HEALTH HAZARD OTHER THAN MINOR NOSE, MOUTH AND THROAT IRRITATION. A TYPICAL FIBER MAY BE CHARACTERIZED AS HAVING A DIAMETER OF 7 TO 13 MICRONS AND A PRACTICALLY CONTINUOUS LENGTH. THESE PHYSICAL DIMENSIONS PRECLUDE SIGNIFICANT DEPOSITION OF FIBER IN THE LUNG. IN ADDITION, ANIMAL STUDIES IN WHICH GROUND AND CHOPPED NEXTEL 312 WERE INTRODUCED INTO THE LUNG THROUGH THE WINDPIPE DEMONSTRATED THAT THERE IS NO SIGNIFICANT PULMONARY REACTION TO THESE MATERIALS.

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The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user.

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***** THIS PACKET CONTAINS MSDS TEXTS FOR THE *****  
***** FOLLOWING PURCHASE ORDERS: *****  
***** 7CU639184 *****  
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DIVISION: CERAMIC MATERIALS DEPARTMENT
TRADE NAME: NEXTEL 312 CERAMIC FIBER WITH 170 SIZING
3M I.D. NUMBER:

98-0400-0028-7	98-0400-0029-5	98-0400-0032-9	98-0400-0033-7
98-0400-0034-5	98-0400-0035-2	98-0400-0036-0	98-0400-0037-8
98-0400-0038-6	98-0400-0039-4	98-0400-0040-2	98-0400-0041-0
98-0400-0042-8	98-0400-0043-6	98-0400-0044-4	98-0400-0045-1
98-0400-0046-9	98-0400-0047-7	98-0400-0048-5	98-0400-0049-3
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98-0400-0070-9	98-0400-0071-7	98-0400-0072-5	98-0400-0073-3
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98-0400-0101-2	98-0400-0102-0	98-0400-0103-8	98-0400-0104-6
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98-0400-0351-3	98-0400-0357-0	98-0400-0388-5	98-0400-0389-3

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SUPERSEDES: MARCH 1, 1984
DOCUMENT: 10-4844-6